A.1. Quality management: an overview of basic concepts and definitions

8.2. The concept of the quality of tourism statistics including a description of the dimensions of quality, as introduced in IRTS 2008 (chap. 9, sect. A), reflects the common approach adopted by the statistical community. This approach is based on the definition of quality as “fitness for use” (IRTS 2008, para. 9.2). IRTS 2008 provides a description of the prerequisites of quality and recommends the adoption of the following dimensions of quality: relevance, credibility, accuracy, timeliness, methodological soundness, coherence, and accessibility. The compilers and users of tourism statistics should refer to IRTS 2008 for the definitions of these dimensions.

8.3. After the publication of IRTS 2008, the Statistical Commission continued its work on issues relevant to quality measurement and management. In particular, the Commission, at its fortieth session, endorsed the generic national quality assurance framework (NQAF) template[1] and at its fortysecond session, the Commission welcomed the comprehensive draft guidelines on integrated economic statistics.[2] The NQAF and the Guidelines on Integrated Economic Statistics, issued in 2013 as a United Nations publication, are seen by the Commission as applicable in all areas of official statistics. NQAF comprises all the quality dimensions of tourism statistics recommended for adoption in IRTS 2008 and emphasizes the importance of such dimensions as reliability, punctuality, clarity, interpretability, comparability, integrity and serviceability. It should be noted that most of these dimensions of quality are treated as components of the dimensions listed in IRTS 2008. The compilers of tourism statistics are encouraged to familiarize themselves with the definitions of quality dimensions available in the glossary of the NQAF and to apply them in practice, so as to ensure better crosscountry and crossdomain comparability of the quality assessment of tourism statistics.

8.4. Examples of two very important quality dimensions for tourism statistics are coherence and consistency. These are defined in Box VIII.1, where their relevance to tourism statistics is explained. The objective in checking for coherence and consistency is to identify and explain differences and to then justify and document statistical adjustments. Compilers need to be aware that, in all likelihood, differences will arise and that an important component of improving quality in tourism statistics is precisely the examination of these differences and the decisions that follow.

8.5. Quality management should be a top priority of the national body responsible for official tourism statistics. It includes quality assurance (through activities that can instill confidence that the processes will fulfill the requirements for the statistical output), quality assessment (assessment of data quality, based on standard quality criteria) and quality documentation (documentation of methods and standards for assessing data quality).

Box VIII.1

Coherence and consistency of tourism statistics

**Coherence** is defined as the adequacy of statistics to be combined in different ways and for various uses. When they originate from different sources and, in particular, from statistical surveys using different methodologies, statistics will often not be completely compatible, and will exhibit differences resulting from different approaches, classifications and methodological standards. There are several groups between which the assessment of coherence is regularly conducted: provisional and final statistics, annual and short-term statistics, statistics from the same socioeconomic domain, and survey statistics and national accounts. The concept of coherence is closely related to the concept of comparability between statistical domains. The terms “coherence” and “comparability” both refer to the relation between two data sets. The difference between the terms lies in the fact that:

- **Comparability** refers to comparisons between statistics based on usually unrelated statistical populations, while
- **Coherence** refers to comparisons between statistics for the same or largely similar populations. Coherence can be generally broken down into “Coherence – crossdomain” and “Coherence – internal”.

**Consistency** is defined as logical and numerical coherence. An estimator is deemed consistent if it converges in probability to its estimand as sample size increases (see International Statistical Institute, The Oxford Dictionary of Statistical Terms). Consistency over time, within data sets and across data sets (often refers to as intersectoral consistency) is a major aspect of this dimension. In each case, consistency in a looser sense carries the notion of “at least reconcilable”. For example, if two series purporting to cover the same phenomena differ, the differences in time of recording, valuation and coverage should be identified so that the series can be reconciled. Inconsistency over time entails to changes that lead to breaks in series stemming from, for example, changes in concepts, definitions and methodology.

More specifically, the following issues are particularly relevant in the area of tourism statistics (see World Tourism Organization, “Coherence and consistency in tourism statistics: an overview”).

- Internal coherence and consistency of tourism statistics (a) between different data sets on supply and demand statistics and (b) between tourism statistics
- External coherence and consistency: (a) integration of tourism statistics in the Tourism Satellite Account (TSA) and thus with the National Accounts and (b) comparison between tourism statistics and the Balance of Payments “travel” and “passenger transport services” items.

Sources: Statistical Data and Metadata eXchange (SDMX); and World Tourism Organization (2014).

8.6. Quality assurance lies at the core of quality management and various experiences at national and international levels have been accumulated in this regard over recent years. Regarding quality assurance for the process of production, NQAF identifies four components, which are fully applicable in tourism statistics: (a) assuring methodological soundness, (b) assuring costeffectiveness, (c) assuring soundness of implementation and (d) managing the respondent burden. In tourism statistics:

(a) **Methodological soundness** is assured through the use of sound statistical methodologies based on internationally agreed standards, like those included in IRTS 2008 and the good practices described in the present Compilation Guide;

(b) **Costeffectiveness** through assured by such activities as implementation of standardized solutions (e.g., with respect to the organization and conduct of various surveys and statistical databases management) that increase effectiveness and efficiency, documentation of the costs of data production at each stage of the statistical process, and costbenefit analyses to determine the appropriate tradeoffs in terms of data quality;
8.7. Regarding quality assurance of tourism statistical outputs, the NQAF lists six groups of activities comprising quality assurance of statistical outputs, which are applicable in the context of tourism statistics, namely:

(a) **Assuring relevance.** The tourism statistics compilers’ challenge is to weigh and balance the conflicting needs of current and potential users in order to produce statistics that satisfy the most important and priority needs under given resource constraints. Relevance can be assured, for example, by consulting users with respect to the content of the work programme and establishing an advisory council to be consulted on overall statistical priorities;

(b) **Assuring accuracy and reliability of outputs.** This involves, for example, assessing and validating the source data, comparing the data obtained with other existing sources of information, identifying clearly preliminary and revised data, and providing explanations about timing, reasons for and nature of revisions;

(c) **Assuring timeliness and punctuality.** This entails, inter alia, a clear definition and dissemination of timeliness targets (and amendments of such targets) in respect of release policy, including distinguishing between different kinds of statistical outputs (e.g., press releases, specific statistical reports or tables and general publications) and the procedure for their release; establishing the procedures to ensure the effective and timely flow of data from providers; explicit consideration of overall tradeoffs between timeliness and other dimensions of quality (e.g., accuracy, cost and respondent burden) during the programme design stage; and clear identification of preliminary data so that users are provided with appropriate information for assessing the quality of the preliminary data;

(d) **Assuring accessibility and clarity.** This includes such activities as the release of tourism statistics with readily accessible and up-to-date metadata, consistent annotation of any differences from the recommendations in IRTS 2008, use of modern information and communications technologies for dissemination (e.g., online database), enabling users to generate their own tables in the most appropriate formats and consulting users on a regular basis to determine which formats of dissemination they most prefer;

(e) **Assuring coherence and comparability.** This entails, for example, cooperation and the sharing of knowledge between individual statistical programmes and domains to ensure that outputs obtained from complementary sources can be properly combined, clear identification and explanation of breaks in the series and provision of methods for ensuring necessary data reconciliation[3].

(f) **Managing metadata.** This encompasses activities that enable the user to understand tourism statistics, including their limitations, for informed decisionmaking (see sect. B).

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